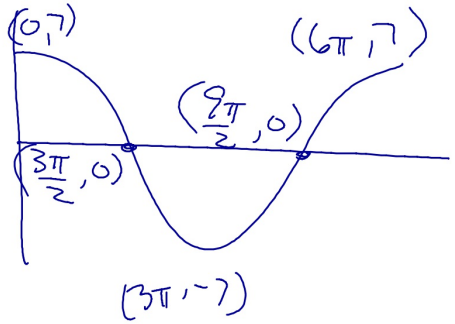
Graph one period of: y = 7Cos(x/3)

label the coordinates of all min, max, and x-int.

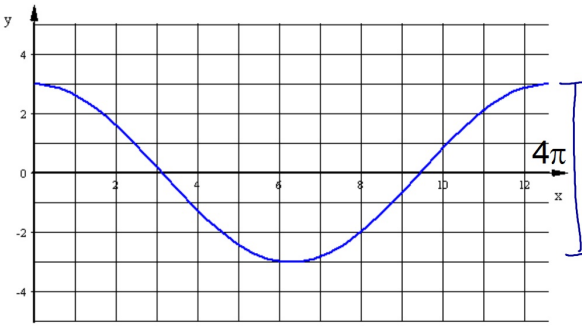


period $= \frac{2\pi}{\frac{1}{3}}$

$= 2\pi \cdot \frac{3}{1}$

$= 6\pi$

Write the equation of this Cosine Function. y = 3Cos(x/2)

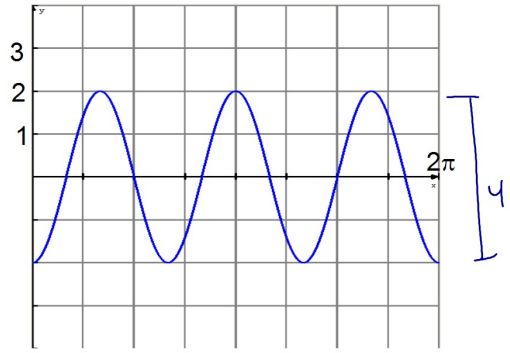


$\rightarrow amp = \frac{6}{2} = 3$

period $= 4\pi$

$b = \frac{2\pi}{4\pi} = \frac{1}{2}$

Write the equation of this Cosine Function. y= -2Cos3x



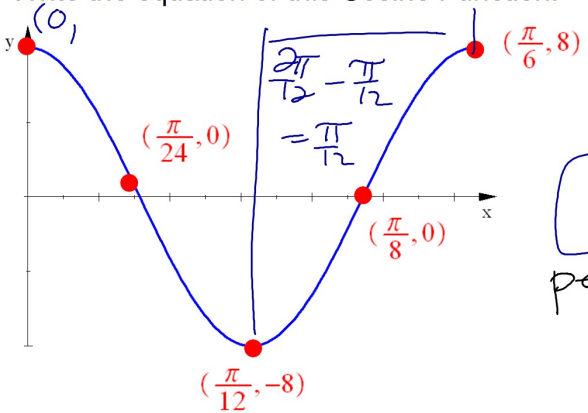
Graph is upside down so a is negative

$amp = \frac{4}{2} = 2$

period $= \frac{2\pi}{3}$

$b = \frac{2\pi}{\frac{2\pi}{3}} = 2\pi \cdot \frac{3}{2\pi} = 3$

Write the equation of this Cosine Function:



$\frac{2\pi}{12} - \frac{\pi}{12} = \frac{\pi}{12}$

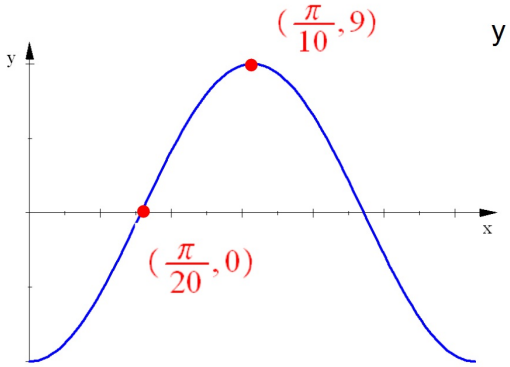
Amp = 8

$y = 8 \cos 12x$

period $= \frac{\pi}{12} \cdot 2 = \frac{\pi}{6}$

$b = \frac{2\pi}{\frac{\pi}{6}} = 12$

Write the equation of this Cosine Function:



y = -9Cos10x

Amplitude: 9

Graph is upside down so a is negative.

Period:

$\frac{\pi}{10} - \frac{\pi}{20}$

$\frac{2\pi}{20} - \frac{\pi}{20} = \frac{\pi}{20} \cdot 4$

$\frac{\pi}{5}$

$b = \frac{2\pi}{\frac{\pi}{5}} = 2\pi \cdot \frac{5}{\pi} = 10$

You can now do Hwk #10

Sec 13-5

Practice Sheet